

Enterprise Business Architecture – A Phased Methodology for Developing a Business Information Repository and Analysis

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Abstract

Enterprise Business Architecture (EBA) is an approach for modeling, structuring and understanding business knowledge that assists business managers in making adroit decisions. EBA is a modeling tool for structuring related business elements and linking them to other architectural elements (information, application, technology, security) in the enterprise. Organizing the elements that comprise a business architecture through modeling manner, that helps business stakeholders to make informed decisions is the key challenge. A methodology which offers a step by step approach to develop and analyze business architecture will provide significant assistance to BPM practitioners. This Article provides a structured such an approach in four phases: Strategy Architecture Modeling, Enterprise Process Modeling, Strategy to Process Architecture Alignment and Business Architecture Analysis.

Keywords

Enterprise Business Architecture, Business Architecture Methodology, Business Architecture Analysis, Process Architecture

Introduction

Enterprise Business Architecture (EBA) is regarded as a major initiative in many organizations and promises to become a major mechanism for addressing the challenge of structuring business related information for business improvement projects (see reference 1-5). Though there are multiple enterprise architecture frameworks, reference architectures and methodologies available, there is an ongoing need for an approach which enables one to model enterprise business information for a particular enterprise (see reference 6-9). The definition of EBA has changed over the years. EBA accommodates a variety of modeling and analysis scenarios with a focus on the decision making process (see reference 10-14). EBA is regarded as an information repository to address common business scenarios through modeling necessary business related elements/attributes/components. Applied business architecture is seen more often as an inter-linked repository of both structural and behavioral components of business, including architectural views, models, visual schemas and information that can be both structured and unstructured knowledge within the enterprise (see reference 15-21).

Based on the various references cited above, it is clear that EBA is evolving and maturing while enterprises continue to search for an overall understanding of business architecture along with a practical approach to developing an EBA repository for effective business decision making. In this Article, I will detail a practical methodology for EBA using a phased approach. The phased approach will assist practitioners in populating the EBA repository with essential information employing methods, templates and guidelines that are particular to each phase. This approach, based on consulting and research expertise, is tool agnostic and can be tailored according to the specific requirements of an enterprise business scenario.

EBA Phased Methodology

A working methodology for developing an EBA repository consists of four major phases or activities: Strategy Architecture Modeling, Enterprise Process Modeling, Strategy to Process Architecture Alignment and Business Architecture Analysis. These four phases are comprehensive--strategy architecture modeling defines the organization's goals , enterprise process modeling describes the structure of process execution knowledge, alignment of strategy to process enables the measurement of performance, and business architecture analysis provides the feedback necessary to perform ongoing improvement of the strategy architecture. This phased approach allows practitioners to move from the as is state to the future state of the business improvement lifecycle.

A snapshot of the four phased approach for EBA is described in the diagram below, followed by brief explanation of each of the phases.

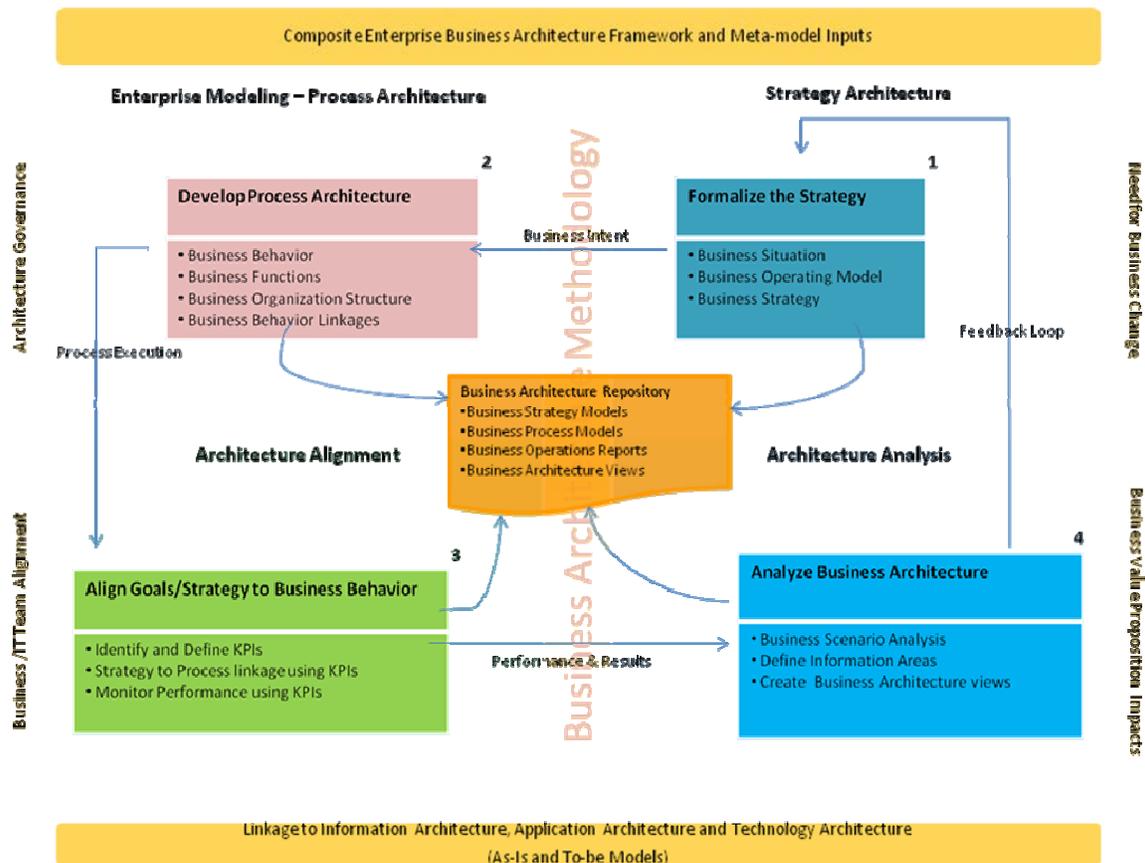


Figure 1: Four Phased EBA Methodology

Composite Enterprise Business Architecture Framework and Meta-model Inputs

This EBA methodology is backed by the Composite Enterprise Business Architecture (CEBA) Framework which consists of 12 elements that constitute three categories of business, specifically, Business Building Blocks (Business Motivation, Business Situation, Business Location, Business Role Player, Business Commitment and Business Event), Business Inputs and Transformers (Business Resources, Business Information, Business Behavior and Business Functions) and Business Value (Business Offerings). The CEBA framework also includes a

meta-model, which is a network representation of the business elements that enables one to model the enterprise using meta modeling approach (see reference 7 for complete details).

Phase I: Strategy Architecture Modeling

Strategy Architecture modeling or 'business strategy formalization' is the initial step in the process of defining the EBA. Every enterprise has defined a strategy which is designed to provide customer satisfaction and toward gaining a competitive advantage in its market.. This phase details exactly how business strategy can be modeled –related to the enterprise's vision, mission, values and goals, and structuring how business value is created for both the internal as well as external stakeholders.

In this phase, the approach focuses on **“Strategy Formalization”** rather than **“Strategy Formulation”** - though there is an overlap, strategy formalization is all about understanding, documenting and aligning strategy of the enterprise thus capturing the business intent. Strategy formulation is defined as either the responsibility of the Corporate Planning team or top management or business leader. Frequently strategy is maintained in the business leader's mind and is not readily apparent. So in this phase, a business architect must interpret the organization's strategy, define the strategy statement, communicate the details to process teams and document the link to operationalization of the business strategy. Balanced Scorecard, Business Motivation Model, SWOT Analysis etc are tools/approaches that can be used in this phase.

Also, the strategy architecture modeling phase is the time to generate an understanding of the business environment, products and services, customer segments and operating model of the enterprise. A select list of tools/approaches like PESTLE analysis, product catalogue definition, customer segmentation, targeting and positioning, financial analysis etc. can be used in this phase.

Phase II: Enterprise Process Modeling

Enterprise Process Modeling or 'process architecture' is the next logical and major step in the process of defining the EBA. Even though a process architecture definition effort can be carried out in isolation (many a times this activity will be the starting point for the EBA effort), performing this activity with an understanding of the business strategy and business model of the enterprise as detailed in phase I adds immense value.

Defining process architecture at the enterprise or business unit level help develop the business context in which we understand the business value chain, value streams and the business processes that are performed to achieve business goals. Process Architecture contributes to an understanding of 'how' the business functions in order to execute the business strategy. The hierarchical breakdown of processes not only helps track business goals/strategies but also helps define software requirements.

Also, in this phase we generate an understanding of the business functions, business organizational structure and linking business processes and other business elements like business events, organization role player, business unit, business location etc. Multiple tools are available on the market to develop process architecture content. A structured operating model, governance mechanism, modeling methodology, tool management and expert process modeling community are a pre-requisite for this phase. See reference 22-28 for a brief definition of Enterprise wide Process Modeling and Architecture.

Phase III: Strategy to Process Architecture Alignment

The third phase in the EBA methodology is linking business strategy and business processes (or business behavior). This 'Architecture Alignment' phase helps in monitoring business strategy execution. Executing Strategy or linking strategy to processes for translating strategies into results and effectively monitoring strategy execution have always been a challenge for enterprises. The elements of strategy must be deconstructed into operational aspects and then tracked for effective performance. Performance measures need to be defined and associated with

business goals, and these key performance indicators (KPI) are then tracked and reported for making informed decisions by the business stakeholders. See reference 29 for a detailed note on the linkage between KPI and EBA.

Typically, a business architect would be involved in understanding the business motivation elements (business goals/strategy/business objectives/tactics) along with the business processes and identifying a performance management system for the enterprise. KPI identification, definition and monitoring are applicable tool/approaches that are available for the business architect.

Phase IV: Business Architecture Analysis

The final phase in developing a practical business architecture is the 'analysis of business architecture' phase in which an impact analysis between business strategy, business operating model and information technology is performed (refer figure 2). The multiple business scenarios, which an enterprise faces, can be broadly grouped into business reorganization scenarios, business improvement scenarios, business change scenarios and IT led business transformation scenarios (see reference 16). All of these business scenarios consume a significant amount of the information required for analysis of the business and IT goals, capabilities, business behavior and performance.

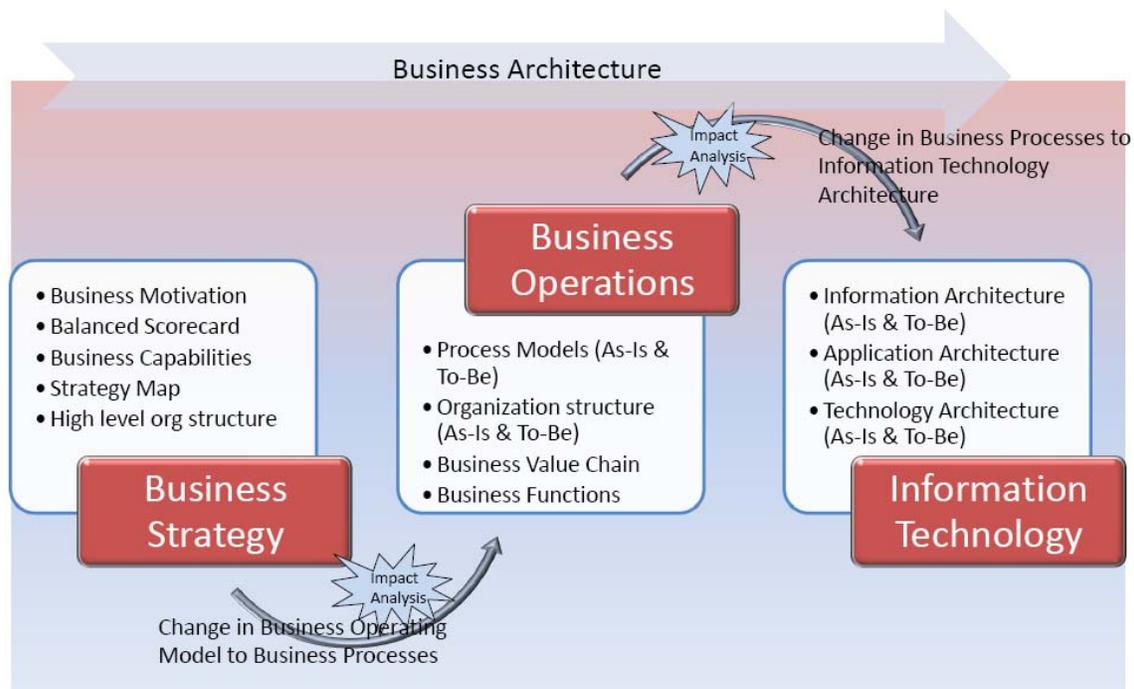


Figure 2: EBA Impact Analysis overview

Information that is gathered in a structured manner in the previous three phases is kept alive in a business architecture repository, and various informational views can be developed for the specific business scenario. The Business Architecture analysis phase deals with the development of accurate views of the business scenarios/initiatives wherein tailored informational views are available to the appropriate stakeholder(s) responsible for business decision making.

Linkage to Information, Application and Technology Architecture (as-is & to-be models)

Business Architecture provides a platform for integrating business information with other enterprise architectural pillars – information, application and technology architecture. This structural analysis and the viewpoints developed out of EBA methodology provide the critical

insights required by the Chief Strategy Officer, Chief Operations Officer and Chief Technology/Information Officer to conduct business impact analysis. Based on the business scenario faced by the enterprise and available structured information from the business architecture repository, the business architect can link the key decisions and their impacts to information, application and technology architectures. This provides the complete enterprise architecture view necessary for various stakeholders and will provide a strong foundation for execution because the business architecture is developed on a structured methodology that will carry out this linkage to other architectural pillars.

Architecture Governance

EBA Governance is all about governing the process for developing the business architecture repository and, in an on-going basis, it addresses the two basic questions: what are the decisions to be made? and who will make those decisions? Governance is applicable to the people, processes and tools involved in the EBA effort and can be managed centrally by a steering committee led by the program sponsor. This activity is applicable in all four phases of the methodology. The typical decisions that are part of the EBA effort are related to the operating model for the program, resource planning, support from stakeholders, methodology adoption and maturity analysis.

Business/IT Team Alignment

Business Analysis for IT application development and maintenance, if aligned with the EBA effort, will enable closer coordination in dealing with business scenario changes. Business and IT teams should coordinate to achieve business goals, and business architecture modeling paves the way for deciding on IT projects and programs.

Need for Business Change

Business Change Management is part and parcel of the modern corporate world. There should be a business change methodology in place which assists stakeholders in structuring the change management programs with respect to the various business scenarios faced by the enterprise. An EBA program must adhere to the overall business change methodology and the need for business change. This also suggests the need to align the EBA program to other major initiatives that run parallel in the enterprise, including compliance management, lean management or BPM, etc.

Business Value Proposition Impacts

A Business Value Proposition articulated through a business case is a must to gain sponsorship for an EBA and other change management projects/programs. EBA methodology must have value to the stakeholders, and the effort should be quantifiable. A viable maturity assessment model and KPI list for the EBA program must be defined and tracked effectively. This phased methodology for EBA repository development provides the ability to track the effort and quantify the results.

Conclusion

This Article provides a comprehensive survey of the EBA literature, and details a phased methodology for EBA content development for business decision making based on extensive consulting and applied research expertise. The phased approach described here is essential to the effective implementation of whatever framework the enterprise adopts. As stated earlier, EBA is maturing, and it will be used more often than not as a key approach by the CxO community for managing business information and knowledge management. EBA enables structural analysis of the business and provides views to stakeholders that assist them in making informed business decisions. In the future, the author will attempt to link EBA with the Decision Sciences, specifically, Behavioral Economics, and examine how it impacts enterprise decision making.

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